

Interactive comment on “The role of geomorphology, rainfall and soil moisture in the occurrence of landslides triggered by 2018 Typhoon Mangkhut in the Philippines” by Clàudia Abancó et al.

Xiangzhou Xu (Referee)

xzxu@dlut.edu.cn

Received and published: 9 October 2020

Landslide plays an important role in landscape evolution, delivers huge amounts of sediment to rivers and seriously affects the structure and function of ecosystems and society. This paper, which is entitled “The role of geomorphology, rainfall and soil moisture in the occurrence of landslides triggered by 2018 Typhoon Mangkhut in the Philippines”, tries to examine the factors susceptible to landslides, consider the potential for early warning of the landslides. The topic looks very interesting and valuable. Nevertheless, a major revision is needed before the manuscript is accepted for publication in

C1

the journal NHESS.

Some problems are listed as follows: 1. Title: I suggest you erase the words “triggered by 2018 Typhoon Mangkhut” in the title. I think the readers will be interested in a relatively universal law related to landslides instead of only a certain storm. Also you have to add an in-depth discussion corresponding to the title revision. 2. Abstract: This part has to be rewritten. The point, “a) it was one of the most intense rainfall 20 events in the year but not the highest”, is a condition to induce the landslides instead of a result. In addition, have you resolved the problems presented in lines 99-104 (page 4), Section Introduction? Please let me know in the abstract with a concise description. 3. Study area. Too many details have been given in Section 2. You may delete some descriptions which are not closely related to the topic of the paper, and the subtitles of the section, including subtitles 2.1-2.4. 4. Methods. (1) Line 110, page 4: What’s the meaning of the unit “m.a.s.l”? (2) How to distinguish a landslide in the area with scarce plants? (3) I do not think a rainfall with the intensity of 4 mm hr⁻¹ is intensive rainfall. Line 374, page 12. You said “Our study suggests a threshold of 2600 mm of rainfall accumulated over the rainy season for landsliding to occur”. However, in lines 226-227, “Our selection of high intensity rainfall events was... exceeding 4 mm hr⁻¹”. The intensity of 4 mm hr⁻¹ is really too small. Maybe 4 mm min⁻¹? 5. Discussion. Section 5.1. What’s the meaning of preconditioning, and have you discussed the preconditioning here? 6. Figures and tables. (1) Most of the figures are not clear. The sizes of the texts in some figures are too small. The figures should be clear as they are printed in black and white. (2) Figure 1. What are the differences between the “study area” and “Regions Study Area”? (3) Figures 2 and 8. The general titles of the figures are needed. (4) Figures 9 and 10. The scales of the vertical coordinates are anticipated. (5) The format of the table in the manuscript is not suitable to the requirements of the journal NHESS. 7. The English writing of this paper is readable. Nevertheless, still some minor language errors exist, e.g., the word “are” in line 153 of page 5 should be erased; in line 51 of page 2, the words “, however the...” may be replaced with the words “; however, the...”; the first letter of the word “Clay” in line 256 of page 9, may

C2

be in lower case.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2020-259>, 2020.